

ABSTRACT

A duplexer dielectric filter is disclosed. This filter has a dielectric block, with reception and transmission areas formed on the dielectric block and respectively having a resonator formed by a resonating hole. This resonating hole is at least partially coated with a conductive material on its internal surface. Reception and transmission terminals are formed on the upper and side surfaces of the dielectric block at positions corresponding to the reception and transmission areas and are insulated from the conductive material of the side surface of the dielectric block. An antenna terminal is arranged between the reception and transmission areas. An open area, free from a conductive material, is formed on at least a part of the side surface of the dielectric block at a position corresponding to the reception area. This open area controls both the coupling capacitance and the loading capacitance of the resonators since the loading capacitance and the coupling capacitance are changed in accordance with the size of the open area. The open area may be formed on the side surface of the dielectric block at one position or may be formed at a plurality of positions corresponding to the resonators within the reception area.